

I claim:

1. A method of producing electromagnetic carrier-interference multiple-access communication signals, the method comprising the steps of:
  - providing for the generation of a plurality of electromagnetic carrier signals, the carrier signals having a plurality of frequencies within at least one predefined frequency window,
  - providing modulation of the carrier signals by a baseband information signal,
  - providing a phase-locking ~~condition~~ to the carriers to produce orthogonal interference wherein the carriers constructively add to create an interference information signal having a predetermined pulse width occurring at one or more predetermined time intervals, and
  - providing transmission of the modulated, phase-locked carrier signals.
2. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals are one or more broadband continuous-frequency signals.
3. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals have discreet frequencies.
4. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 3 wherein the discreet-frequency electromagnetic carrier signals are incrementally separated in frequency.
5. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 3 wherein the discreet-frequency electromagnetic carrier signals are non-incrementally separated in frequency.

6. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals <sup>predetermined</sup> have frequencies ~~that are contained within a predetermined frequency band~~ to allow for frequency separation of the carrier signals with respect to other carrier signals.
7. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for generation of the carrier signals includes providing for frequency dithering of the carrier signals, the amount of the frequency dithering being substantially uniform in frequency variation with respect to time.
8. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for generation of the carrier signals includes providing for time-offsetting of the carriers in order to time-offset the interference information signal.
9. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing phase-locking to the carriers effects the step of providing modulation of the carrier signals, the phase-locking condition being controlled by the baseband information signal.
10. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing modulation of the carrier signals comprises pulse amplitude modulation being applied to a plurality of the carriers, the pulse amplitude modulation having a pulse width that is longer than the pulse width of the interference information signal.
11. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing modulation of the carrier signals <sup>includes</sup> ~~wherein~~ phase-shift key modulation of the carriers ~~is effected~~ within a phase-shift key time-interval equal to the pulse width of the interference

a information signal, ~~the phase-shift key time interval being centered in each of the time interval in which the interference information signals occur,~~ the phase-shift key modulation of the carriers being performed with respect to a predetermined pseudo-random code.

12. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals are RF signals.
13. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals are optical signals.
14. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 13 wherein the step of providing transmission of the carrier signals includes providing conversion of the optical carrier signals into RF carrier signals.
15. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for the generation of the carrier signals includes providing for a plurality of groups of discreet carrier frequencies, each group having a predetermined number of carrier signals, the spacing between the discreet carrier frequencies in each of the groups determining the repetition rate of the interference information signal, the number of discreet carrier frequencies in the groups determining the pulse width of the interference information signals, each interference information signal comprising a number of sub-pulses determined by the spacing between groups of carrier signals, the sub-pulses having sub-pulse widths determined by the number of groups of discreet carrier frequencies.

16. The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for the generation of a plurality of electromagnetic carrier signals includes tapering the ~~frequency-versus amplitude~~ <sup>frequency-versus amplitude</sup> window of the carrier signal amplitude distribution to reduce time-domain sidelobe energy of the interference information signal.

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